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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/665,598

09/22/2003

Fumio Kubo

1131-0488P

6369

2292 7590 01/25/2007
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EXAMINER

CORDRAY, DENNIS R

ART UNIT

PAPER NUMBER

1731

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
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3 MONTHS

01/25/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 01/25/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/665,598	Applicant(s) KUBO ET AL.	
	Examiner Dennis Cordray	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/20/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The replacement drawings, received on 11/7/2006, are accepted.

Response to Arguments

Applicant's amendments and arguments filed 11/7/2006 have been fully considered but have not overcome the previous rejections and they are not persuasive. Applicant argues on page 11 that the amendment to Claim 1 reciting a "stagnation detecting line extending along a width of the separation passage of which the width extends in a traveling direction of the tobacco band" is not equivalent to the line of detection in the Okumoto and Labbe references that extends across the gap defined by the front and rear walls.

The newly recited limitation is rejected for reasons described in detail below as presenting new matter unsupported by the originally filed Specification, and as failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Even if the assumption is made that the detection line represents the path of the light emitted and/or reflected by the optical sensing device or mirror, and that the referenced width of the separation passage is the width between the two sides of the separation passage perpendicular to the front and back walls, then the claimed width, although not be specifically recited in the prior art, would have been obvious to one of ordinary skill in the art for the following reasons. In the Background Art portion of the instant Specification, the problem of stagnation of tobacco shreds, potentially leading to

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clogging, in the widthwise opposite regions of the passage is admitted to be known in prior art (p 2, lines 6-32). The prior art is used in the rejections to demonstrate that it is well known in the art to use the "line of detection" of optical sensors to detect tobacco accumulation for purposes of controlling flow and for detection of potential stagnation or clogging. It would thus have been obvious to one of ordinary skill in the art at the time of the invention to locate and direct the "line of detection" of the sensors so as to impinge on any developing stagnation or clogging of the separation chute.

The rejection is maintained.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The newly recited limitation in Claim 1 states that "said detection means including a stagnation detecting line extending along a width of the separation passage of which the width extends in a traveling direction of the tobacco band." Insufficient description is provided in the originally filed Specification to determine in which directions the tobacco

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band travels through the process. No direction or directions of travel were specified. The tobacco band need not travel in only a single direction throughout the process. In addition, the original Specification did not specify a "stagnation detecting line", but a "detection means arranged in the separation passage at a location lower in level than the intermediate portion thereof" (p 3, lines 28-32), which detection means can be an optical sensor wherein detection light is emitted from one side wall in the width direction of the separation passage and is received or reflected on the opposite sidewall (p 4 line 24 to p 5, line 12). Furthermore, the "width" is not defined in the Specification. There are two widths of the separation passage, one between the front and back walls, and the other between the two sides of the passage perpendicular to the front and back walls.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The newly recited limitation states that "said detection means including a stagnation detecting line extending along a width of the separation passage of which the width extends in a traveling direction of the tobacco band."

The original recited a "detection means arranged in the separation passage at a location lower in level than the intermediate portion thereof" (p 3, lines 28-32), which

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detection means can be an optical sensor wherein detection light is emitted from one side wall in the width direction of the separation passage and is received or reflected on the opposite sidewall (p 4 line 24 to p 5, line 12). Furthermore, the "width" is not defined in the Specification. There are two widths, one between the front and back walls, and one between the two sides of the separation passage perpendicular to the front and back walls. Defining the width as "in a traveling direction of the tobacco band" does not clarify the meaning because a tobacco band need not travel in only a single direction throughout the process.

The meaning of the words "a stagnation detecting line" is not clear. Is there a physical line or wire extending between two opposing walls of the separation passage that detects when a blockage builds up and contacts the line? Is there an imaginary line that corresponds to the direction of the light emitted and/or reflected by the optical sensing device or mirror? Does the detection line correspond to a physical feature of the wall of the separation passage, such as the throttling ridge?

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brand et al (5645086) or Kazuichi et al (JP 2957173) in view of Okumoto et al (EP 0165080) and further in view of Labbe et al (4121596).

Brand et al discloses a shredded tobacco feeding apparatus for a cigarette manufacturing process (Figure, cols 3-6) comprising:

a feed passage extending to the tobacco band of the cigarette manufacturing machine (ref. nos. 24 and 52; col 4, lines 19-23; col 5, lines 29-34),

supply means causing the shredded tobacco to fall to an inlet of the feed passage (ref. no. 11; col 3, lines 37-47),

pneumatic transport means for producing a flow of air in the feed passage toward the suction surface of the tobacco band (ref. no. 14; col 3, lines 47-57),

a separation chute having an upper end opening in the vicinity of the feed passage inlet (area between plenum 13 and rotary wheel gate 17; col 3, lines 56-59),

a separation passage opening into the feed passage downstream of the separation chute and having a lower end opening downward (ref. no. 18; col 3, line 59 to col 4, line 18),

delivery means for collecting shredded tobacco in the separation chute and delivering it to an intermediate portion of the separation passage, the delivery means sealing a junction between the separation chute and separation passage (ref. no. 17; col 3, lines 57-63),

an introducing means for causing a flow of air flowing toward said feed passage to be produced in said separation passage at a higher level than the intermediate

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portion thereof (ref. nos. 19 and 21; col 3, line 66 to col 4, line 11). The flow of air toward said feed passage would allow outside air to be introduced to the separation passage from the lower end opening.

Kazuichi et al discloses a cut tobacco feeder for a cigarette producing apparatus (Figs 1-2) comprising:

- a feed passage extending to the tobacco band of the cigarette manufacturing machine (ref. nos. 12 and/or 16),

- supply means causing the shredded tobacco to fall to an inlet of the feed passage (ref. no. 4),

- pneumatic transport means for producing a flow of air in the feed passage toward the suction surface of the tobacco band (ref. nos. 10 and/or 14),

- a separation chute having an upper end opening in the vicinity of the feed passage inlet (ref. nos. 40 and/or 42),

- a separation passage opening into the feed passage downstream of the separation chute and having a lower end opening downward (ref. nos. 44 and/or 58),

- delivery means for collecting shredded tobacco in the separation chute and delivering it to an intermediate portion of the separation passage, the delivery means sealing a junction between the separation chute and separation passage (ref. no. 50).

Brand et al and Kazuichi et al do not disclose a detection means or a removing means for accumulations of shredded tobacco in the separation passage.

Okumoto et al disclose a shredded tobacco feeder for a cigarette producing apparatus comprising a feed path through which shredded tobacco passes to the cigarette conveyor of the cigarette making machine. Okumoto et al teaches that tobacco pieces can accumulate in the feed path and cause clogging and subsequent shut down or damage of the apparatus. A detection device monitors the path and produces an alarm signal stopping the machine when a plug is detected (Abs; p 2, lines 1-35). The detection device can be a photoelectric reflective type detector that emits light from one wall and senses the light reflected back from the opposite wall. Alternatively, the photoelectric device can emit light from one wall and sense the light with an optical sensor on the opposite wall (p 6, line 27 to p 7, line 26; Figs 6a-d). The two types of detection device are analogous to the claimed devices.

Okumoto et al does not disclose the use of a mirror on a wall opposite the light emitting portion of the detection device. Okumoto does not disclose an air blowing means for ejecting air along one of the light emitting/receiving or mirror surfaces. Okumoto does not disclose a removing means for accumulations of shredded tobacco.

Labbe et al discloses a cigarette making machine comprising a steeply sloping feed channel through which shredded tobacco passes in a downward direction before being fed to a tobacco band (Fig. 1, ref. no. 40; col 3, line 49 to col 4, line 5). The height of the tobacco in the feed channel is controlled by photoelectric sensors, which vary the rate at which tobacco is fed to the channel (col 4, lines 6-10). In addition, one

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wall of the channel can be vibrated to facilitate the feed of tobacco through the channel (col 3, lines 63-65).

Labbe et al does not disclose the use of a mirror on a wall opposite the light emitting portion of the detection device. Labbe et al does not disclose an air blowing means for ejecting air along one of the light emitting/receiving or mirror surfaces.

The art of Brand et al, Kazuichi et al, Okumoto et al, Labbe et al and the instant invention are analogous as pertaining to the transport of shredded tobacco in a cigarette making apparatus. In the Background Art portion of the instant Specification, the problem of stagnation of tobacco shreds, potentially leading to clogging, in the widthwise opposite regions of the passage is admitted to be known in prior art (p 2, lines 6-32). The cited prior art demonstrates that it is well known in the art to use the "line of detection" of optical sensors to detect tobacco accumulation for purposes of controlling flow and for detection of potential stagnation or clogging. It would have been obvious to one of ordinary skill in the art to use photoelectric detectors to detect if tobacco shreds were accumulating in the separation passage in the tobacco feeding apparatus of Brand et al or Kazuichi et al in view of Okumoto et al and further in view of Labbe et al to prevent catastrophic shutdown of the process or damage to the apparatus. The use of a mirror in the opposite wall from a photoelectric reflective type detector would have been obvious to provide as good of a reflection as possible. It would also have been obvious to one of ordinary skill in the art at the time of the invention to locate and direct the "line of detection" of the sensors so as to impinge on any developing stagnation or

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clogging of the separation chute. Employing a stream of puffs of air to keep the light emitting/receiving or mirror surfaces clean would have been an obvious step to ensure accurate sensor operation. While the detectors in the process of Okumoto et al shut down the apparatus when a plug is detected, an alarm to notify the operator would be an obvious step as well. It would also have been obvious to use vibration of at least one wall of the separation passage as a well known means to loosen potential clogs and aid in the transport of the tobacco pieces through the passage.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

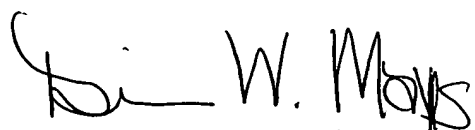
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


DRC


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